

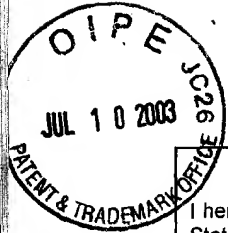
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TC 1700

CASE PP/3-21904/AC 515/PCT

AF/1731



CERTIFICATE OF MAILING

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7/8/03
Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE PCT NATIONAL STAGE APPLICATION OF

SIMON DONNELLY ET AL.

INTERNATIONAL APPLICATION NO. PCT/EP

PCT/EP00/00160

FILED: JANUARY 12, 2000

FOR: AQUEOUS POLYMERIC EMULSION

COMPOSITIONS AND THEIR USE FOR
THE SIZING OF PAPER

U.S. APPLICATION NO: 09/889,889

35 USC 371 DATE: July 23, 2001

Group Art Unit: 1731

Examiner: P. Chin

Response Under 37CFR 1.116-
Expedited Procedure
Examining Group 1731

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

AMENDMENT AFTER FINAL REJECTION

Sir:

This Amendment is being filed responsive to the Office action (Final Rejection) mailed on August 8, 2003, the response to which is being mailed within the shortened statutory period for response. It is requested that the amendment be entered to place the claims in condition for allowance or, alternatively, in better form for appeal.

No fee, petition, or certification is required. The Commissioner is authorized to charge any fee due, or credit any overcharge, as a result of this Amendment to Deposit Account No. 03-1935.

Please amend the above-identified patent application, without prejudice, as follows.

IN THE CLAIMS

Kindly replace claims 1 and 3 by the following claims.

1. (amended) A method of sizing paper or paper board by applying a composition (A) to at least one of,

i) the surface of a formed paper or paper board sheet,

ii) a paper or paper board making cellulosic suspension prior to draining,

wherein the composition (A) comprises an aqueous dispersion of polymeric particles of particle size up to 1 micron, wherein the polymeric particles comprise a water insoluble polymer matrix, comprised of ethylenically unsaturated monomer or ethylenically unsaturated monomer blend, wherein an oligomer formed from a monomer blend comprising,

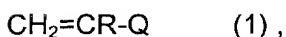
(a) (meth)acrylamide,

(b) an organic mercaptan or organic sulphone, and

(c) an ethylenically unsaturated monomer comprising either a tertiary amine group or a quaternary ammonium group

is located at the surface of the polymer particles.

3. (twice amended) A method according to claim 1 wherein component (c) comprises a compound of formula (1)



wherein

Q is $-\text{C}(\text{O})-\text{Z}-\text{A}-$, $-\text{CH}_2-\text{N}^+\text{R}_1\text{R}_3\text{CH}_2\text{CR}=\text{CH}_2 \text{ X}^-$ or $-\text{CH}_2 \text{NR}_1\text{CH}_2\text{CR}=\text{CH}_2$,

Z is $-\text{O}-$ or $-\text{NH}-$,

A is $-C_nH_{2n}-B-$,

n is an integer from 1 to 4,

B is $-NR_1R_2$ or $-N^+R_1R_2R_3 X^-$,

R is $-H$ or $-CH_3$,

R_1 is C_{1-4} alkyl,

R_2 is C_{1-4} alkyl,

R_3 is $-H$ or C_{1-8} alkyl, C_{5-7} cycloalkyl or benzyl, and

X^- is an anion.

STATUS OF THE CLAIMS

Claims 1-26 were pending in this application.

Claims 1-26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Izubayashi et al. (EP 3290594) in view of Tsai et al. (WO97/37078).

Claims 1-26 are presented for reconsideration.